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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/853,370 | 05/11/2001 | Donald S. Gardner | 42390P11265 | 7273 |

8791 7590 02/18/2004

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EXAMINER

NGUYEN, TUYEN T

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2832

DATE MAILED: 02/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/853,370

Applicant(s)

GARDNER, DONALD S.

Examiner

TUYEN T NGUYEN

Art Unit

2832

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 11-17, 20-25 and 31-35 is/are pending in the application.
- 4a) Of the above claim(s) 12-15 and 31-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 11, 16, 20-25 and 35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>12/8/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 11, applicant should clarify the structure intended by "the second conductor over the substrate and over the second conductor."

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 6, 11, 16-17, 20, 25 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizoguchi et al. [US 6,404,317] in view of Mizoguchi et al. [US 6,121,852].

Mizoguchi et al. '317 discloses a planar magnetic transformer [figures 21-24] comprising:

- a substrate [10];
- a first conductor [40A] mounted over the substrate defining a generally spiral-shaped signal path having at least one turn;
- a second conductor [40B] mounted over the substrate defining generally spiral-shaped signal path having at least one turn, wherein the second conductor lies over the first conductor;

- a first magnetic layer [30A] disposed between the substrate and the first conductor; and
- a second magnetic layer [30B] disposed over both the first and second conductors.

Mizoguchi et al. '317 discloses the instant claimed invention except for a magnetic layer being disposed between the all of the spiral shape signal path of the first and second conductors.

Mizoguchi et al. '852 discloses an inductor device [figure 13] formed on an substrate [27] including a magnetic layer [22] disposed two conductor layers [24, 25].

It would have been obvious to one having ordinary skilled in the art at the time the invention was made to use the magnetic layer arrangement of Mizoguchi et al. '852 in Mizoguchi et al. '317 for the purpose of controlling the magnetic flux.

Regarding claims 20, 25-26 and 35, the method steps claimed would have been inherent in the product structure.

Claims 2-5, and 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizoguchi et al. '317 in view of Mizoguchi et al. '852, as applied to claims 1, 6, 7, 11, 16-17, 20, 25-26 and 35, 36 and 38 above, and further in view of Fessant et al. [IEEE paper, copyrighted 1993].

Mizoguchi et al., as modified, discloses the instant claimed invention except for the specific material use for the magnetic layer.

Fessant et al. discloses the use of amorphous CoZr thin films.

It would have been obvious to one having ordinary skilled in the art at the time the invention was made to use the materials shown by Fessant et al. for the magnetic layers of Mizoguchi et al., as modified, for the purpose of providing low coercitivity.

Regarding claims 21-24, the method steps claimed would have been inherent in the product structure.

Response to Arguments

Applicant's arguments with respect to claims 1-6, 11, 16-17, 20-25, have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TUYEN T NGUYEN whose telephone number is 703-308-0821. The examiner can normally be reached on M-F 8:30-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ELVIN ENAD can be reached on 703-308-7619. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TTN TTN

Tuyen Nguyen